

International University of Africa (IUA)



Deanship of Higher Studies

Faculty of Pure and Applied Science

Departement of Mathematic and Computer

**A supplementary research for a master's degree in
Mathematics entited :**

The Baire Category theorem and its applications

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بسم الله الرحمن الرحيم

قَالَ يَغَارُ:

(... رَفَعَ إِلَيْنَا الزَّيْنَةَ الْمُنَوَّلَةَ مِنْكُمْ وَالزَّيْنَةَ الْوَلَوَّلَةَ)

(الْعَلَامَةُ وَالْجَمَاعَةُ وَاللَّيْنَةُ بِمَا نَعْمَلُوهَا خَيْرًا)

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Abstract :-

In this research , we offer some basic ideas about the theory of Baire Category , and we Want to proved this theory for IR , and the establishment of the theory itself for \mathbb{R}^n . TheBaire Category theorem has many important results in functional analysis , which well show you some of them in this research. Some of this results are present in this research.

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